

Energy Information Administration U.S. Department of Energy **Uranium Industry Annual Survey** Survey Year 1999 Schedule A

Form Approved 10/27/97 OMB Number 1905-0160

Expiration Date: 10/31/2000

Data on this mandatory survey are collected under authority of Section 13(b) Federal Energy Administration Act of 1974 (Public Law 93-275), and section 1015 of the Energy Policy Act of 1992 (Public Law 102-486). Provisions regarding sanctions are described in Part IV, page i of the instructions. Provisions regarding the confidentiality of information submitted in response to this survey are set forth on page xiii of the instructions for Schedules A and B.

The public reporting burden for this form is estimated to average 25.0 hours per response, including the time of reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Please send your comments about this burden estimate, suggestions for reducing this burden, or any other aspect of this collection of information to: the Energy Information Administration, Statistics and Methods Group EI-70, 1000 Independence Avenue SW, Washington, DC 20585; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

RESPONDENT IDENTIFICATION			
Company Name:			
Address:		Respondent ID (Fo	or EIA Use Only)
City:State:Zip:			
Parent Company:			
APPLICABILITY OF SCHEDULE A			
Check one box on each line under column (b) or (c). If Partotal number of properties and mills or plants reported.	rt II and Part III are appl	licable, give in col	umn (d) the
EIA-858 Schedule and Part (a)	Applies to This Company (b)	Does Not Apply to This Company (c)	Number Submitted (d)
A, Part I: Exploration and Development			
A, Part II: Reserves and Mine Production by Property			
A, Part III: Uranium Milling and Processing			
A, Part IV: Employment			
CONTACT PERSON			
Schedule A:			
Name (Please print):	Title:		
Signature:	Date:		
Phone:()			
E-Mail Address:@			

Title 18 U.S.C. 1001 makes it a crime for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious or fraudulent statement or misrepresentation as to any matter within its jurisdiction.



Energy Information Administration U.S. Department of Energy Uranium Industry Annual Survey Survey Year 1999 SCHEDULE A: URANIUM RAW MATERIAL ACTIVITIES

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Part I: Exploration and Development

ITEM 1: JOINT V	VENTURE AR	RANGEMENT	ΓS				
Was your company the "Yes", list names of				the Surve	ey Year?	☐ Yes ☐ N	lo
1			4.				
2							
3			5 6				
J			0				
ITEM 2: EXPLO	RATION LAN	ID STATUS AN	ID COST FOR T	THE SU	RVEY YI	EAR	
Explo	oration land acqui	red:				Acres	8
Cost	of all exploration	land acquired:			\$		
Total	exploration land	released:				Acres	S
Total	exploration land	held, December 31	st of Survey Year:			Acres	3
ITEM 3: EXPLO	RATION AND	DEVELOPMI	ENT DRILLING	BYST	TATE ANI	D TOTAL COST	
Survey Year Drilling	g: Include drillin	g done for assessr	nent under explora	tion dril	lling.		
]	Exploration Drillin	ıg		D	evelopment Drilling	
States	Holes	Feet	Cost	Но	oles	Feet	Cost
Arizona							
Colorado							
Nebraska							
New Mexico							
Texas							
Utah							
Washington							
Wyoming Other (Specify):							
Other (Specify).							
Totals:			\$				\$
Following Year:							Projected
Tollowing Tear.							Total Cost
Projected Estimates							\$
ITEM 4: OTHER	EVDI OD ATI	ON AND	TEEN A C. EVE	ENIDIT	TIDEC EC	D EXPLODATE	ON I
		ON AND PENDITURES				OR EXPLORATION	ON
	e assessment act		IN I	OREIC	GN COU	VTRIES	
(meraac	assessment act	avides)				Total Expe	nditures
All other expendit	ures: \$		Country			Survey	Following
						Year	Year
ITEM 5: FOREIO						\$	\$
EXPLOR	RATION EXP	ENDITURES				\$	\$
Contribution by for	eign-owned con	npanies:				\$	\$
Survey Year:		%					
Following Year	r (planned):					\$	\$



Energy Information Administration U.S. Department of Energy Uranium Industry Annual Survey Survey Year 1999 SCHEDULE A: URANIUM RAW MATERIAL ACTIVITIES Part II: Reserves and Mine Production by Property

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		ship N. or S.	Range E. or W		-		le W.
2000-0-100		<u> </u>				0	ʻW
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		T	Status: (Check of		11		'W
Name of Firm			•		8		
	C	Ownership	_ ^	•			
			•	•	omplete		
				•	•		
-			-		Production		
in:	'		^	2011			
	, identify						
which it was transferred:							
			•		•		
						pply):	
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/				y study			
OPERTY URANIUM RES							
	R	Reserves Qua	ntities by Cost (Category	(\$ per pour	nd U ₃ O ₈)	
-	\$15	\$30	\$50	\$100	\$	\$	
. ,							
Ore (1000 tons)							
U ₃ O ₈ (1000 lbs)							
2 3 '							
U ₃ O ₈ (1000 lbs)							
tion date:/(MM/YY	<i>(</i>)						
ERATING COST USED I	N ESTIM	ATING RES	SERVES		·		
Mining		O	perating Cost (\$	per Ton	of Ore)		
Method	Direct		Povelty	Direct	Indirect	Othor	.1
la		3 Hadiage		Milling	Costs		
		\$	\$ \$				
4		J.O. Recovered	Ψ		Ψ	Ψ	
9		3 9 21000 10104	¹Define O	her Co	sts:		
·):	\$		Define of				
	Name:	Name Section(s) Town	Name: Name of Firm	Name of Firm Name of Firm	One Name: Name Countrols Countrols	Name: State: Mame: State: State: Section(s) Township N. or S. Range E. or W. Latitude N.	Name: State: County: Section(s) Township N. or S. Range E. or W. Latitude N. Longitude N. Section(s) Section(s) Status: (Check only one): Only assessment work being done Exploration completed Development for production Mine in production Mine in production Mine closed temporarily Mine closed temporarily Mine closed permanently Mine closed temporarily Mine closed temporarily Mine closed temporarily Mine closed permanently Mine closed per



To Others

Energy Information Administration U.S. Department of Energy Uranium Industry Annual Survey Survey Year 1999

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Property Name:				nd Mine Production by			
Capital Costs for Development, Construction and Equipment Capital Costs Mining Method Capital Costs Mine or ISI. Field Mill or Plant S S Underground S S S S Other: (Specify method chosen) S S S S Other: (Specify method chosen) S S S S Other: (Specify method chosen) S S S S S Other: (Specify method chosen) S S S S S Other: (Specify method chosen) S S S S S Other: (Specify method chosen) S S S S S S Other: (Specify method chosen) S S S S S S S S S	Property Name:						
Capital Costs for Development, Construction and Equipment Capital Costs Mining Method Mine or ISL Field Mill or Plant S S Underground S S S S Other: S S Other: S S S S Other: S S S S Other: S S S S S Other: S S S S S Other: S S S S S S S S S	ITEM 10: CAPIT	AL COSTS BY MINI	NG	METHOD			
Mine or ISL Field Mill or Plant							
Mine or ISL Field Mill or Plant	-			Car	oital (Costs	
Openpit S		Mining Method					
In Situ Leach S S S Other S S S Other (Specify method chosen) S Other (Tons or Grade): S Other (Tons or Grade): S Other (Specify method chosen) S Other		Openpit			\$		_
Other S S				\$	\$		
Other: (Specify method chosen) Other: (Specify method chosen)					\$		_
Number of holes drilled, including barren holes, in the reserves outline: During the Survey Year: Holes.				! ·	•		_
Number of holes drilled, including barren holes, in the reserves outline: During the Survey Year: Holes.		Other: (Specify metho	a che	osen)			
During the Survey Year: Holes.	ITEM 11: DRILL	ING AND RESERVE	S ES'	TIMATION PARAMET	ΓERS		
During the Survey Year: Holes.	Number of holes dr	illed including barren b	oles	in the reserves outline:			
Reserves Estimate Parameters Break-even cutoff grade (Percent U,O ₂) Grade x thickness (Feet Percent) Cutoff ore thickness Minmum mining height (Feet) Average area of influence per ore hole (Sq Ft) Tonnage factor (Cubic Feet per Ton) Mine Recovery factor (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U ₃ O ₈) TIEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined TORE (Grade): Underground In Situ Leach Other¹ Other, please specify: Shipment Destination Ore Facility Facility Name To Stockpile To Mining Method Ore Tore (Tons) Contained U,O ₈ (Pounds) V.O ₈ (Pounds)	rumber of holes ar	med, merading barren i	ютез,	in the reserves outline.			
Break-even cutoff grade (Percent U_1O_8) Grade x thickness (Feet Percent) Cutoff or thickness Minmum mining height (Feet) Average area of influence per ore hole (Sq Ft) Tonnage factor (Cubic Feet per Ton) Mine Recovery factor (Percent) Mill or plant recovery (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U_1O_8) TEEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U_1O_8 (Pounds) V_1O_8 (Pounds) Openpit Underground In Situ Leach Other¹ (Tons or Grade): Other¹ (Tons or Grade): Shipment of Ore or Pregnant Solutions Shipment Destination Ore (Tons) Contained U_1O_8 (Pounds)	During the Survey	Year: Holes	s.	P	rior to	the Survey Year:	Holes.
Break-even cutoff grade (Percent U_1O_8) Grade x thickness (Feet Percent) Cutoff or et hickness Minmum mining height (Feet) Average area of influence per ore hole (Sq Ft) Tonnage factor (Cubic Feet per Ton) Mine Recovery factor (Percent) Mill or plant recovery (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U_1O_8) Average ore grade (Percent U_1O_8) Average ore grade (Percent U_1O_8) TEEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U_1O_8 (Pounds) V_1O_8 (Pounds) Openpit Underground In Situ Leach Other¹ (Tons or Grade): Other¹ (Tons or Grade): Shipment of Ore or Pregnant Solutions Shipment Destination Ore (Tons) Contained U_1O_8 (Pounds)	Reserves Es	timate Parameters		Openpit		Underground	In Situ Leach
Grade x thickness (Feet Percent)				оренри		onder ground	In Suu Leuch
Minmummining height (Feet) Average area of influence per ore hole (Sq Ft) Tonnage factor (Cubic Feet per Ton) Mine Recovery factor (Percent) Mill or plant recovery (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U ₃ O ₈) TIEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) U ₃ O ₈ (Pounds) Openpit Underground In Situ Leach Other (Grade): Other (Tons or Grade): Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Ore (Tons) Ore (Tons) Ore (Tons) Contained U ₃ O ₈ (Pounds) Contained U ₃ O ₉ (Pounds)	Grade x thickness (F						
Average area of influence per ore hole (Sq Ft) Tonnage factor (Cubic Feet per Ton) Mine Recovery factor (Percent) Mill or plant recovery (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U ₃ O ₈) ITEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U ₃ O ₈ (Pounds) Openpit Underground In Situ Leach Other¹ (Tons or Grade): Other Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Facility Facility Name To Stockpile		1. (7)					
Tonnage factor (Cubic Feet per Ton) Mine Recovery factor (Percent) Mill or plant recovery (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U ₃ O ₈) TEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained V ₂ O ₈ (Pounds) Openpit Underground In Situ Leach Other ¹ (Tons or Grade): Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Facility Facility Facility Name To Stockpile							
Mine Recovery factor (Percent) Mill or plant recovery (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U ₃ O ₃) TEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U ₁ O ₃ (Pounds) Openpit Underground In Situ Leach Other ¹ (Tons or Grade): Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Facility Facility Name To Stockpile Contained V ₂ O ₃ (Pounds) Contained U ₃ O ₈ (Pounds) Contained V ₂ O ₃ (Pounds)							
Mill or plant recovery (Percent) Average depth to ore (Feet) Average ore thickness (Feet) Average ore grade (Percent U ₃ O ₈) ITEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U ₃ O ₈ (Pounds) Openpit Underground In Situ Leach Other¹ (Tons or Grade): Other, please specify: Shipment Ore or Pregnant Solutions Shipment Destination Facility Facility Name To Stockpile		- ·					
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Average ore thickness (Feet) Average ore grade (Percent U ₃ O ₈) ITEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U ₃ O ₈ (Pounds) V ₃ O ₃ (Pounds)	<u>*</u>						
Average ore grade (Percent U ₃ O ₈) ITEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U ₃ O ₈ (Pounds) V ₂ O ₅ (Pounds)							
TEM 12: MINE PRODUCTION AND SHIPMENTS OF ORE OR PREGNANT SOLUTIONS Uranium and Vanadium Mined Mining Method Ore (Tons) Contained U ₃ O ₈ (Pounds) V ₂ O ₅ (Pounds)							
Uranium and Vanadium Mined Ore (Tons) Contained U_3O_8 (Pounds) Contained V_2O_5 (Pounds) Openpit Underground In Situ Leach (Grade): Other I (Tons or Grade): In Situ Leach (Tons or Grade): Other, please specify: In Shipment of Ore or Pregnant Solutions In Stitu Leach In S		3 8/					
Uranium and Vanadium Mined Ore (Tons) Contained U_3O_8 (Pounds) Contained V_2O_5 (Pounds) Openpit Underground In Situ Leach (Grade): Other I (Tons or Grade): In Situ Leach (Tons or Grade): Other, please specify: In Shipment of Ore or Pregnant Solutions In Stitu Leach In S	ITEM 12: MINE I	PPODITCTION AND	СПІ	DMENTS OF ODE OD	DDE	CNANT SOLUTIO	NC
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			5111	I WILIVIS OF ORE OR	IKL	ONAINI SOLUTIO	7113
Mining Method Ore (10ns) U3O8 (Pounds) V2O5 (Pounds) Underground Underground In Situ Leach Other¹ (Tons or Grade): Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Facility Facility Name To Stockpile Ore (10ns) U3O8 (Pounds) V2O5 (Pounds) V2O5 (Pounds) Contained U3O8 (Pounds) V2O5 (Pounds)	Uranium and van	adium Mined					
Openpit Underground In Situ Leach (Grade): Other¹ (Tons or Grade): ¹Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Facility Facility Name To Stockpile Openpit (Grade): (Tons or Grade): (Tons or Grade): Contained U ₃ O ₈ (Pounds) Contained V ₂ O ₅ (Pounds)	Minin	ng Method		Ore (Tons)	1		
In Situ Leach (Grade): Other¹ (Tons or Grade): ¹Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Ore Facility Facility Name (Tons) To Stockpile Other¹ (Tons or Grade): Contained U ₃ O ₈ (Pounds) Contained V ₂ O ₅ (Pounds)							1 2 5 (2 3 3 3 3 3)
In Situ Leach (Grade): Other¹ (Tons or Grade): ¹Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Ore Facility Facility Name (Tons) To Stockpile Other¹ (Tons or Grade): Contained U ₃ O ₈ (Pounds) Contained V ₂ O ₅ (Pounds)	Underground						
Other (Tons or Grade): Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Facility Facility Name To Stockpile Other, please specify: Contained U ₃ O ₈ (Pounds) Contained V ₂ O ₅ (Pounds)			(Grad	de):			
Other, please specify: Shipment of Ore or Pregnant Solutions Shipment Destination Ore (Tons) Contained U ₃ O ₈ (Pounds) Contained V ₂ O ₅ (Pounds)			(Ton	s or Grade):			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		rify:	(
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		•	s				
Facility Facility Name (Tons) U ₃ O ₈ (Pounds) V ₂ O ₅ (Pounds) To Stockpile	F						
To Stockpile Tacinty Name	Shipment l	Destination					Contained
	Facility	Facility Name		(Tons)		U ₃ O ₈ (Pounds)	V ₂ O ₅ (Pounds)
	To Stockpile						
	_						



Energy Information Administration U.S. Department of Energy Uranium Industry Annual Survey Survey Year 1999 SCHEDULE A: URANIUM RAW MATERIAL ACTIVITIES Part III: Uranium Milling and Processing

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ITEM 13: MILL OR PLANT INI Name and Location: Facility Name: Other Name(s) Used:		C	ounty:	State:	- Nonco	ntional m onvention	ill	
Section(s)	Towns	ship N. or	S. Ran	ge E. or W.	Latitude	N. I	ongitude	W.
					0	'N	0	ʻW
					0	'N	0	ʻW
					0	'N	0	ʻW
Ownership:	<u> </u>		Control	lership:				
Name of Firm		ercent nership	the party	rm no longer co to which it was	s transferred:	·	•	
				·				
				•				
				()				
ITEM 14: RATED CAPACITY			Indicate	the nature of the firm nam	the arrange	ment bet	ween your	
Conventional mill (Tons ore per day	y) ¹			_	`	_		
Nonconventional plant (Lbs U ₃ O ₈ p	er yr) ¹		_	r arrangemen	Contract		Lease	
See provisions regarding confidenti of information in the instructions.	ality							-
ITEM 15: OPERATING STATUS	S DURING SU	RVEY YE	AR					
Number of days operated in Survey Was facility operated throughout Su Was facility operating at end of Sur	rvey Year? vey Year?	Yes		Actual: o, give closin	•	_/	MM/YY	
If facility did not operate during		1	TT 11'	(, 11)				
Closed temporarily (Restart plan		1)		(standby) cost	• •		\$	
Closed indefinitely (Following Y Closed permanently (Will not be				cost to reope			\$	
Reclaimed (Restoration in progr Other status (Please specify):_		d)	production	equired to reton, if decided rvey Year	urn plant to to on Decembe	full er 31st	r	nonths
¹ See provisions on confidentiality of	information in t	he instructi		ivey rear				
ITEM 16: URANIUM CONCEN	TRATE PROD	OUCTION					Mill Feed:	
Category		Conven	tional	Nonconve	ntional		all sources e water	,)
Ore Fed-to-Process	Tons Ore						p leach	
Other Mill Feed ¹ (Lbs U ₃ O ₈)	Lbs U ₃ O ₈						ngs water	
	Prior Year						er (Specify)):
	Survey Year							
Possible Production: 100% Recovery (Lbs U ₃ O ₈)						lant Feed:	
Total Plant Feed ² (Lbs U ₃ O ₈) Concentration Production (Lbs U ₃ O ₈)							all sources	;)
Tailings and Unaccountable (Lbs U_2O_8))						tu Leach	
Recovery Percent	,						amation	
Concentrate Inventories (Lbs U ₃ O ₈)	Prior Year						roduct reco	•
	Survey Year					U Othe	er (Specify)):
Concentrate Shipped (Lbs U ₃ O ₈)								



Energy Information Administration U.S. Department of Energy Uranium Industry Annual Survey Survey Year 1999 SCHEDULE A: URANIUM RAW MATERIAL ACTIVITIES

FOR EIA USE ONLY										

Part IV: Employment

ITEM 17: EMPLOYMENT BY STATE

		Employment (Person-Years): Include staff and contract personnel.											
States	Exploration	Mining	Milling	Processing	Reclamation								
Arizona													
Colorado													
Florida													
Nebraska													
New Mexico													
Texas													
Utah													
Washington													
Wyoming													
Other (Specify):													
Totals:													

COMMENTS FOR SCHEDULE A